

Teak Therapy

A guide to cleaning, sanding, refastening and recaulking teak decking

By Susan Canfield

In philosophical terms, teak decking is the yin and yang of nonskid. On the one hand, it provides exceptional traction and aesthetics, on the other it's more expensive and requires more maintenance than any other nonskid. Many boatbuilders still hand-lay teak decks, fitting, bedding and screwing planks down one at a time. "What's so bad about that?" you ask. "The craftsmanship is awesome." True. So is the sheer quantity of screws used to fasten the wood, most of which typically extend through the upper skin of the fiberglass deck laminate and into the core. Can you guess how many screws hold down the teak overlay on my Tayana 37 cutter? Would you believe 1,300? That's 1,300 potential paths for water to leak into the core and ultimately the boat's interior. In the process, the typical end grain balsa or plywood core will rot and the deck molding will eventually delaminate. As a marine surveyor, I often find evidence of deck molding delamination—and boats with teak overlays are the most common victims. Is it any wonder teak decked boats have earned the sobriquet "Leaky Teakies"?

Before you ask why any sane person would buy a teak decked boat, remember that teak – wet or dry – is truly a great nonskid material. Properly maintained, it looks terrific. Fortunately, boatowners can maximize the yin and minimize the yang of teak decking by taking a disciplined but conservative approach to maintenance during the boating season – including routine washing and light sanding – and by using a full boat cover in the winter. If and when the time comes that you need to refasten and recaulk your teak decks – usually every 15 to 20 years, sooner if the deck isn't maintained – you needn't go screaming for the hills. After surveying three "leaky teakies" in one week recently, I decided it was time to overhaul my 1982 Tayana's teak deck. I spent the better part of two weeks on my knees, and while I didn't emerge from the overhaul looking like new, my decks did. In the process, I learned a few tricks to make the work go more quickly.

Surface Maintenance

There are three keys to teak maintenance: weekly washdowns, infrequent bleaching, and occasional sanding to keep the surface flat and smooth so water rolls right off it. Routine washing goes a long way to keeping teak decks in optimum condition. Clean salt water works best; it bleaches the teak and helps prevent mildew. If clean saltwater isn't available, freshwater will do, but mix some TSP (tri-sodium phosphate) with your chosen detergent. Wet the decks down, then allow the detergent solution to soak into the wood for several minutes before scrubbing lightly with a white (fine) 3M Scotch-Brite pad. (You can work standing up if you fit the pad on the end of a long-handled Doodlebug.) Scrub in a circular pattern or across the grain. Don't use a bristle brush or scrub with the grain; both tend to tear out the softer wood fibers, creating ridges and valleys that will trap dirt and mildew, making the wood harder to get and keep clean.

With weekly washdowns, a teak deck will gradually weather to an attractive silvery gray. But let's say you want to get the gray out. Bleaching the wood will restore its natural color; unfortunately it will also erode the wood more quickly, so do it infrequently. Try a one-step cleaner and brightener (like Teak Wonder) first. Make an oxalic acid paste if you need to spot clean stains left by suntan lotion or food; neutralize it with vinegar or borax. If this method just doesn't cut it, use a two-part teak cleaner like Teka as a last resort. Dilute each part 1:1 with water before you apply it using two plastic spray bottles labeled A and B. And be careful – the acid in two-part cleaners will dull fiberglass and painted surfaces; it will also wreak havoc on anodized aluminum. You'll have to mask the hull sides beneath deck scuppers and drains (I keep a roll of 3M Marine's Ready-Mask, a pre-taped plastic film, onboard for the purpose), as well as any anodized deck hardware. Before applying part A, wet the teak deck thoroughly with water. Keep a hose with spray nozzle handy; don't let the surface of the wood dry until you're finished with both part A and part B. A fine water mist will allow the cleaner-brightener to work, even under a hot summer sun, and prevent premature drying. After cleaning, avoid using teak oils and sealers. Both tend to attract dirt and break down the seam caulking.

Even with all this loving care, you'll have to get on your knees every year or two and become one with your sander to keep the wood grain flat. Unless you're very experienced with a belt or disc sander, stick with a random orbital sander using 120-grit paper. It'll take longer, but you're far less likely to scar your decks in the process.

If your deck is badly eroded and you need to remove a lot of wood to make it smooth again consider removing hardware bolted to or through the overlay first. Yes, this is a major hassle, but if you leave the stuff on there you'll have to hand sand around most of it – a time consuming and tedious process. Besides, now's the perfect time to rebed all those fittings so they won't leak. It's also a good time to inspect deck hardware fasteners and chainplates under a magnifying glass for evidence of corrosion. Stainless steel is highly susceptible to crevice and pitting corrosion in the oxygen-deprived environment inside wet deck core (I had to replace all of my boat's chainplates and several bolts). Finally, follow all the rules for sealing exposed edges with epoxy filler—this includes fastener holes as well as other areas such as vent and hatch openings where the builder cut into the deck mold.

Don't Bungle Your Bungs

After years of weathering, cleaning and sanding, the teak plugs (also know as bungs) covering the decking screws will wear so thin they'll lose their grip and pop out. Wherever a screw head is exposed, water is likely to find its way into the deck core, so it pays to replace popped bungs promptly. First, remove the exposed screw and re-drill the countersink to an appropriate depth. Vacuum out any debris before injecting penetrating epoxy into the hole to seal the core, and install a new screw that's a quarter-inch shorter. Finally, align the grain of each new bung with that of the surrounding teak plank before tapping it home. I dip the bottom of each bung in varnish, which serves as glue and sealer, as I fit it. After the varnish has had time to dry, use a sharp chisel, beveled side down, to cut the new bungs off just above deck level. As needed, sand the bungs down using a sanding block or orbital sander. If your decking is badly eroded and you have a number of popped bungs, it may be prudent to remove all the bungs and screws before sanding. It's best to do this with the boat indoors or under some type of weather-proof cover. You'll also need a good set of knee pads and a big bottle of ibuprofen. With my boat's 1,300 bungs and 1,300 fasteners, this became a two-day job. Most bungs can be forced up and out of their holes by running a screw into them, and you can do this more quickly if you cut off the head of an appropriate wood screw and insert its shank into the chuck of a battery powered drill. Bungs not readily removed this way were probably dipped in epoxy before being fitted, and in this case, you'll have to drill them out. Once the bungs and screws are out, sand the deck as needed. Then countersink, vacuum, inject penetrating epoxy, and install screws and bungs as indicated above. When the job is done, head for a hot tub.

Seams So Simple

Weather, teak oils and sealers all take a toll on seam caulking, which eventually will pull away from the adjacent teak, letting water find its way under the overlay and into the boat. You can spot where the caulking has failed when you wash your deck; look for areas along seams that stay wet far longer than the surrounding deck. You'll find you can insert a fingernail or thin blade between the caulk and teak. The first step to fix failed seams is to remove the deteriorated caulking. Small projects can be tackled using a utility knife and hooked scraper, which you can make by heating the shank of a standard screw driver or the tail of a file and bending it about 90 degrees. As needed, shape the scraper's tip on a grinder to fit your seams. For larger projects, use a router or other mechanical means to clean out the old caulk and simultaneously deepen the seams. I found that a Porter Cable laminate trimmer (trim router) with a straight carbide bit worked well. If your seams are perfectly straight, a six-inch circular saw with stacked (crosscut or dado) blades can be used in lieu of a router. You'll need some type of guide to keep the router or saw properly aligned with the seam. In tight areas that a router or saw can't reach, I used a Fein MultiMaster variable speed oscillating tool with a hooked knife blade. Fein "teak knives" are available in 3mm, 4mm and 5mm widths; use whichever corresponds best to your seam width. Once the old caulk is out, make sure the seams are dry and free of sawdust and any residual caulk. Since teak is naturally oily, wipe the walls of the seams with acetone (or denatured alcohol) to remove surface oil that could impair adhesion. Next, protect the deck with masking tape. Yes, this is time consuming, but you'll be grateful you did because it'll mean less sanding once the new caulk has cured. Run masking tape alongside each seam, but don't let it lap over into the seam or you'll have trouble pulling the tape later. Tape over all other exposed teak as well.

Deck caulking is formulated to absorb side-to-side movement of the teak decking as it expands and contracts with changes in temperature. Virtually all caulk manufacturers say performance will be impaired if the sealant adheres to the bottom of the seam. A bond breaker or release tape (like 3M Fine Line masking tape) can be placed in the seams first to prevent adhesion. Many professional boat repairers omit this step, probably to reduce total man-hours when bidding for the job. The manufacturers of modern pre-assembled teak overlays (see Redecking Options below) use release tape, probably because they warranty their product. If you expect to own your boat for another 10 to 15 years, it pays to use a bond breaker.

I used Boat-Life's two-part pourable Life Caulk and was very satisfied with the results. (One-part products require that a primer be painted on the seam walls prior to caulking.) To avoid trapping air bubbles, hold the caulking gun vertically and fill the seams from the bottom. Use a putty knife to smooth the surface of the caulk against the masking tape. Let the caulk set up before pulling the masking tape, at a 90° angle to the seam, or you'll spatter black caulk everywhere. Once the caulk has cured, you can run a sharp chisel along each seam to trim away any excess. Finally, sand lightly as needed

Labor	Man-Hours
Remove deck hardware penetrating teak overlay	16
Remove teak plugs and screws	16
Remove deteriorated caulking	32
Sand overlay	6
Countersink/counter bore for new screws and plugs	6
Inject penetrating epoxy, install new screws and plugs	16
Recaulk seams	48
Finish sanding	2
Reinstall deck hardware	16
Total	158

Estimated man-hours to sand, refasten and recaulk the teak overlay on a 37-foot boat, using power tools whenever possible. Labor includes preparation and clean up. Actual man-hours will vary depending on worker skill level, extent of deck overlay deterioration, tools used, working conditions, etc.

Materials	Quantity	Cost (\$US)
3-M Hook-It 5" and 8" sanding discs, 80 and 120 grit	1 box/roll each	110
Smith's clear penetrating epoxy sealer (CPES)	2 pints	32
Screws, 3/4" marine-grade stainless steel	1300	123
Teak plugs, 3/8" diameter	1300	143
3-M #233 3/4" paint masking tape	10 rolls	50
BoatLife bond breaker, 50-yard roll	6 rolls	162
BoatLife Life Caulk, 2-part pourable caulk	4 gallons	470
Empty caulking cartridges	36	31
BoatLife Life Caulk solvent	1	8

Miscellaneous consumables (surgical gloves, paper suits, particle masks, paint rags, 1- and 5-quart plastic mixing buckets, acetone, etc.)	as required	80
Total		1,209

Quantities indicated are those used for the author's 37-foot boat. Costs reflect special promotional pricing and/or outfitting discounts available through major marine suppliers. Additional costs not reflected here may include: fees for protected storage and/or mast removal, tool purchase or rental, and skilled labor.

Redecking Options [Sidebar]

If you plan to remove your boat's teak overlay, consider the many redecking options. Unless you're restoring an historic vessel, there's little reason to hand-lay individually fastened teak planks. The least expensive option is to refinish your decks with paint, using non-skid in the areas you choose. Synthetic deck coverings like those produced by Treadmaster and Vetus offer better traction than paint, but the sharp edges of their non-skid patterns can be uncomfortable to sit on in a bathing suit or shorts. If you like the look of teak but lack the time or discipline to clean it regularly, check out Flexiteek, a newer synthetic decking material that's popular in Europe. In a recent internet search, I also found two companies that manufacture pre-assembled custom teak decking panels. Both use patented adhesives and vacuum bagging to bond teak planks to a thin fiberglass or plywood base. These panels are then installed on the boat using an adhesive, minimizing the need for fasteners. Following are some more sources of useful information

- Deck Caulk: Boatlife, www.boatlife.com/howto.htm; Maritime Wood Products, www.maritimewoodproducts.com; Sika, www.sikasolutions.com/Marine/290.htm; Teak Decking Systems: www.teakdecking.com;
- Synthetic Overlays: Treadmaster, tiflex.co.uk/marine; Vetus, www.vetus.com/products/deck_coverings.htm; Flexiteek, www.goldenarrow.co.uk/Flexiteek.htm.
- Pre-Manufactured Teak Overlays: Maritime Wood Products, www.maritimewoodproducts.com; Teak Decking Systems, www.teakdecking.com.

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